BAMC Survey

Review

January 6, 2012

Ukiah

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Technical Chair
BAMC Online Survey - Background

• **The purpose of the survey**
  
  – Collect data on the following
    1. Who does and does not have broadband
    2. What types of access to the internet exist
    3. Vendor penetration data
    4. Cellular penetration data
    5. Drive BAMC project direction

  – Also we are looking for
    1. Awareness of the issue and community interest
    2. Volunteers for BAMC
• First Survey
  – Closed November 9th
  – 370 responses
  – Only 1-5% failure rate, duplicate records, etc.
  – Good data, but not yet enough to say we represent the population
    • we have over 1% of 34,000 households or 340 responses
    • 5%-10% would be excellent (1700 to 3400 responses)

• Current Survey – Ongoing. Latest snapshot Jan 5th
  – Questions adjusted based on comments received from public
  – Combined with media blitz to drive responses
  – More options for text input
  – Over 2000 responses in two months
  – Goal is 3400 responses which equates to 10% of households
Survey Results - Data Trends

- **Reported speeds** (from 1st generation survey results)
  - **DSL** – 2.297 Mbps
    - Highest reported was 21.6 Mbps in Mendocino and 5 Mbps in Comptche
    - Many DSL subscribers have less than 5 Mbps (48%)
    - Many other DSL subscribers do not know what they are paying for (41%)
    - Only 11% reported DSL speeds that met FCC broadband guidelines
  - **Cable modem** – 11.187 Mbps down
    - Highest reported was 22 Mbps in Ft. Bragg and 19 Mbps in Little River
    - Ukiah and Willits areas reported around 5 Mbps
  - **Satellite** – 1.13 Mbps down
    - Highest reported 5.519 Mbps in Potter Valley and 3.5 Mbps in Gualala
    - Most speeds were 1 Mbps or below
    - Some numbers thrown out due to satellite caching error
Survey Results – Data Trends

• **Interesting trends** (as of the January 5th map run)
  – 9% of respondents said they have no access at all to the internet
    • This is interesting because the survey was completed online!
  – The average price paid for internet access is $57.83
    • High = $460 per month for T1 and Low = $7 per month for dial-up
    • Satellite costs were in the $70 to $90 range
  – Based on a 5 Mbps down / 1 Mbps up definition of “served”
    • 24% of responding households are “un-served”
    • 68% of households are “under-served”
    • 8% of households are “served”

• **The access technology in our county consists of:**
  – Cable modem - 22%
  – Cellular – 3%
  – Dial-up - 24%
  – DSL or T1 – 23%
  – Satellite – 25%
  – Wireless – 3%
Lessons - What is a “served” household?

- **Multiple definitions as to what “served” means**
  - **Definition #1** – Asset availability based
    - Fixed line connectivity (DSL, Cable Modem, Fiber)
    - Under this definition 45% of households are “served”
  - **Definition #2** – Technology based
    - A household is served if the technology is capable of supporting broadband
    - Under this definition 45% of households are “served” January 1
    - Under this definition 70% of households will be “served” once Via-Sat1 is RFS
    - Under this definition 73% of households will be “served” in 2014 when LTE deploys
  - **Definition #3** – Speed based
    - Definition #3 indirectly takes into consideration the cost of service
    - FCC definition of 4 Mbps downstream / 1 Mbps upstream
      - Only 8% of households are “served” under this definition
    - USDA definition of 768Kbps downstream / 384Kbps upstream
      - Under this definition, 76% of households are “served”

- **The definition changes to suit the politics and money**
  - We have to adjust mapping results based on the audience
  - Each funding opportunity has its own parameters of “un-served” and “under-served”
Lessons: Collecting data from the public

- Some datasets had to be “intelligently interpolated”
  - Fix inconsistent or impossible data entries
    - Example: 1 Mbps over a dial-up line or 28 Kbps over a DSL line
    - The first one is not possible. The second one – who knows?
  - Some respondents had editorial comments
    - Example: “way too much” as the amount paid monthly
  - A leading indicator that we need community outreach & education
    - People do not understand what broadband is versus access to the internet
    - People need to be educated on what they are buying

- We must remember that the data has a limited shelf life
  - This is a dynamic environment
  - Networks expand and technology evolves

- Sample size needs to be statistically representative of households
  - Current sample size of 2200 provides:
    - 95% confidence level (how sure we can be)
    - +/- 2% confidence interval (variance of the results)
  - Areas north of Willits still under-represented
  - Those who do not have internet access are under-represented
    - Need to strengthen paper survey process
Many maps can be generated from the data

- Select your filter
  - Speed
  - Technology
  - Cost
  - Any survey question element can probably become a map filter
- Maps are good for showing trends
- Maps can also identify points of interest
  - Example: Early adopters who may have solved technology challenges

Example: The Map of technology deployed in Mendocino county:

(Jan 5, 2012 map run)

- Cable modem - 22% (yellow)
- Cellular - 3 % (purple)
- Dial-up - 24% (red)
- DSL or T1 - 23% (green)
- Satellite - 25% (blue)
- Wireless - 3% (orange)
Mapping – Deployed technology

KEY

- 22% Cable modem - yellow
- 3% Cellular - purple
- 24% Dial-up - red
- 23% DSL or T1 - green
- 25% Satellite - blue
- 3% Wireless - orange
Mapping – Household reported speed

KEY
- Above 5 Mbps - blue
- Between 56K and 4.99 Mbps - yellow
- No access - red
Mapping – Reported speeds in Ukiah

KEY

• Above 5 Mbps – blue
• Between 56K and 4.99 Mbps - yellow
• No access - red
Mapping – Reported speeds in Potter Valley

KEY

• Above 5 Mbps – blue
• Between 56K and 4.99 Mbps - yellow
• No access - red
Conclusions & Action Items

Keep up the survey data collection

• Focus on paper process now
• Continue outreach to north rural areas
• Merge with census blocks

Expand the data to include other regions

• Lake & Sonoma

We still need to understand the politics behind the FCC and CPUC data
End

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